

How to Prioritise Requirements

Rob Purdie, PMP
April 22, 2006

Introduction

When you're planning to implement a new piece of software, prioritising your requirements is really important because a) it helps you focus on the things that matter most and b) it makes selecting the right product way less of a crap shoot. But unless you follow a logically sound prioritisation process — one that all project stakeholders understand and buy into — prioritising requirements can become an arbitrary and unnecessarily emotional exercise (i.e. the exact opposite of what you want).

1. Define and Weight Organisational Objectives
2. Identify and Weight User Types
3. Define Requirements
4. Score Requirements

The four steps this article argues you should take to prioritise requirements.

On the Greenpeace UK CMS project, we're currently defining the requirements for a new content management system (the existing system was developed in ColdFusion over 4 years ago and simply no longer meets its users' needs). Our plan is to evaluate 3 open source products and make a selection based on how well each product meets our top priority requirements — to do so, we're following a step-by-step process designed to keep us focused on

the system features and capabilities that are most important to the web team, to our end users and to Greenpeace.

Step 1. Define and weight organisational objectives

Like I've said before, projects are undertaken to achieve strategic objectives. Greenpeace has a number of strategic objectives, one very important one being to win campaigns. At our away day meeting in February, we brainstormed on how the web team could help Greenpeace achieve this objective, performed a SWOT analysis, came up with a number of project ideas and decided that replacing the existing Greenpeace UK CMS

with something better was the most important project for the web team to undertake at this time.

Having made the decision to take on a project (i.e. a temporary endeavour involving risk), teams should write down and distribute the organisational/team objectives the project is being undertaken to address. This will help ensure project stakeholders are on the same page, can help determine whether the project really should be undertaken at all and will factor into both requirements definition and prioritisation later on.

We defined 3 organisational objectives for the Greenpeace UK CMS project, and assigned weightings to each, according to how well we thought they could help us help Greenpeace win campaigns (see Figure 1, below):

1. To make Greenpeace staff (and the organisation) more effective [weighting: 4]
2. To communicate information more effectively [weighting: 3]
3. To build/maintain the Greenpeace brand more effectively [weighting: 2]

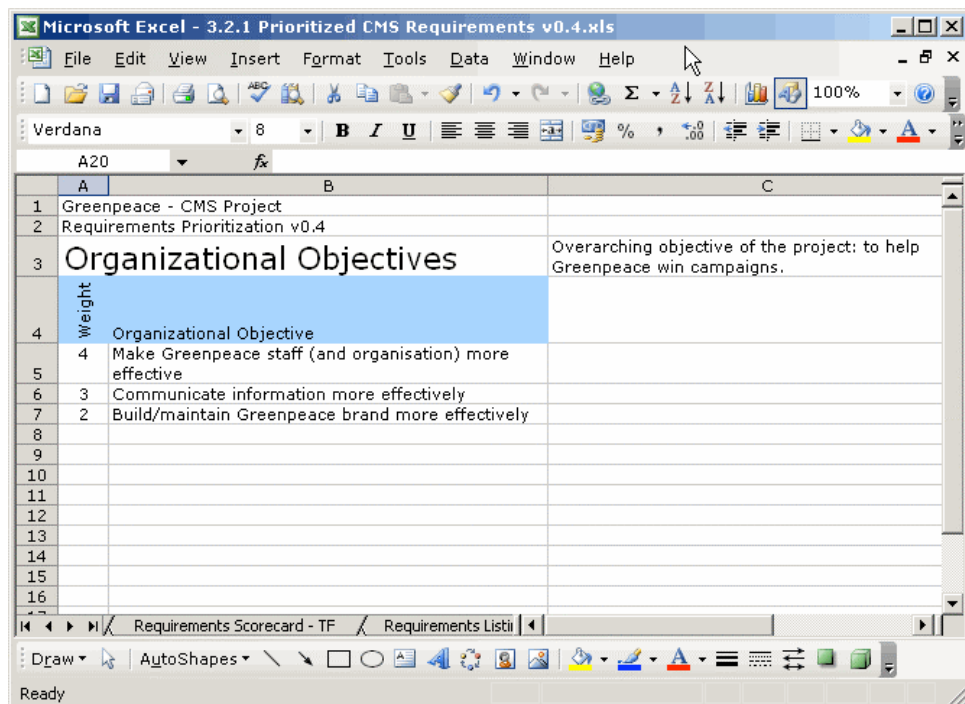


Figure 1 – defining and weighting organisational objectives.

Step 2. Identify and weight user types

Once organisational objectives have been defined and prioritised, identify and assign weightings to the types of users that will interact with the system you've decided to implement. Again, you want to do this because you want stakeholders to come to

agreement on who the project is being undertaken to serve, and because you need to think about (and, where possible, directly involve) the users of the system in the requirements definition and prioritisation process.

Users are people/machines who/that interact with a given system — in the case of the Greenpeace UK CMS project, we identified 4 different user types, and weighted them according to their relative importance in achieving our overarching project objective of helping Greenpeace winning campaigns through the implementation of a better content management system (see Figure 2, below):

1. Content editor [weighting: 3]
2. User [weighting: 2]
3. Supporter [weighting: 2]
4. IS/IT person [weighting: 1]

Weight	User Type	
3	Content Editor	
2	User	
2	Supporter	
1	IS/IT Person	

Overarching objective of the project: to help Greenpeace win campaigns.

Figure 2 – defining and weighting user types.

Step 3. Define Requirements

Once you've defined and weighted the organisational objectives your project is being undertaken to address, and you've identified and weighted the user types the project is meant to serve, define the requirements for the software you're planning to implement with your objectives and users in mind. On the Greenpeace UK CMS project, we started by looking at the PMBOK's definition for requirement:

Requirement. A condition or capability that must be met or possessed by a system, product, service, result, or component to satisfy a contract, standard, or specification.¹

Given this, and looking back on the notes from our away day in February, we developed a list of over 100 conditions and/or capabilities the new Greenpeace UK CMS must meet or possess in order to achieve our organisational objectives and to satisfy our user types.

Each requirement was given an ID, and documented using a technique Martin Lloyd of Greenpeace International suggested we try, which phrases requirements like so: "As a [select user type] I would like to [describe what you would like to do] so that [describe why you would like to do it]" (see Figure 3, below). This worked extremely well for us — it really helped us to define our requirements so that they were easy to understand (and/or to identify the ones that needed to be clarified).

ID	Requirement	User
00007	As a Content Editor I would like to have a preview function or staging server	Content Editor
00008	As a Content Editor I would like to have a workflow that allows sign off by other editors, forcing us to sub each other's work	Content Editor
00013	As a User I would like to have icons appear beside all multimedia links	User
00024	As a Content Editor I would like to have a "search and replace" function in the CMS (maybe by page, site section or site-wide)	Content Editor
00026	As a Supporter I would like to have the breadcrumbing reflect the site structure (instead of user journey)	Supporter
00027	As a Content Editor I would like to be able to edit left hand (and bottom of page) navigation	Content Editor
00030	As a Content Editor I would like to be able to promote more	Content Editor
00031	As a Content Editor I would like to be able to promote more	Content Editor

Figure 3 – defining requirements.

Step 4. Score Requirements

Next comes the fun part. Once you have a set of requirements your team members have all had a hand in developing, ask each member of the team to score them based on how well they help achieve the organisational objectives you've defined and how well they help meet the needs of the user types you've identified (see Figure 4, below). We

had a list of 90 requirements (pared down over time through discussion), and each member of the team scored each requirement using the following system:

Scoring

- 2 = Requirement helps meet objective/satisfy user
- 1 = Requirement partially helps meet objective/satisfy user
- 0 = Requirement does not help meet objective/satisfy user

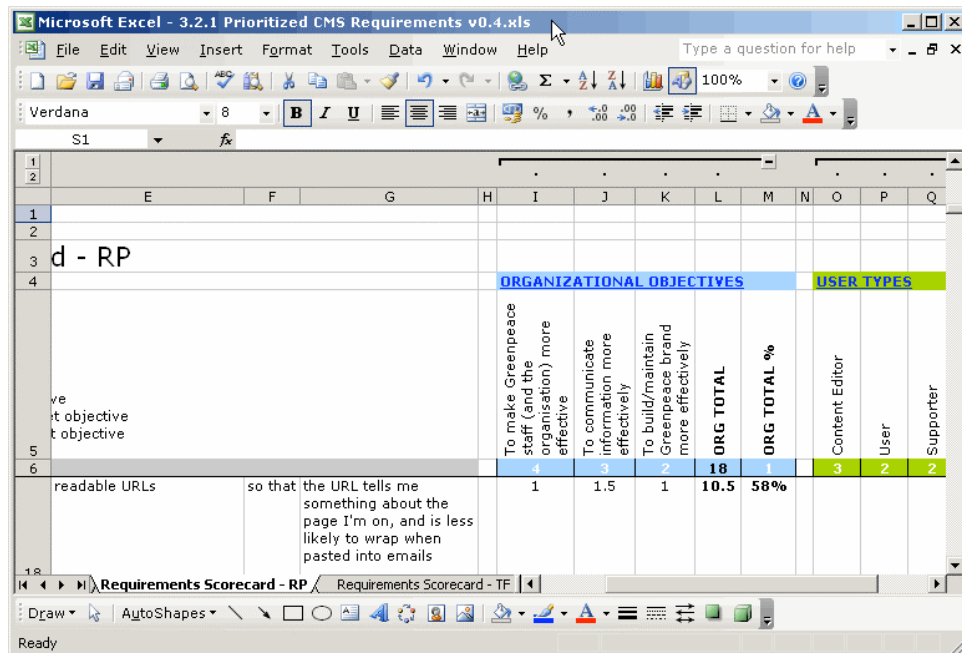


Figure 4 – scoring requirements.

It pays to take your time through this exercise — the more precise you can be when using this scoring system (e.g. "1.8" vs. "2.0"), the more useful the end results will be. Once all scores have been given, average them for each requirement and sort the results from highest to lowest. The spreadsheet we used also assigns a priority category to bands of requirements (C for critical, H, M and L for high, medium and low), which is very useful as well — because we want to stay focused on the system features and capabilities that are most important to the web team, to our end users and to Greenpeace, we'll focus our product evaluation on how well each CMS meets our most critical, highest priority requirements.

Endnotes:

¹Project Management Institute. A Guide to the Project Management Body of Knowledge: PMBOK Guide - 3rd Edition. Pennsylvania: Project Management Institute, 2004. pp 371-372.

Rob Purdie is the Director of Important Projects, a values-based project management consulting and training practice focused on helping social change organisations achieve their strategic goals through the effective and successful management of their most important programs, projects and ongoing operations.

For more information, go to: <http://importantprojects.co.uk>